Amendments to the Claims

The listing of claims will replace all prior versions, and listings, of claims in the application:

CLAIMS:

Claim 1 (Currently amended): A process for the purification of olanzapine characterized in that said process comprises the following steps:

a) mixing olanzapine with an organic acid in an organic solvent or a mixture of organic solvents to form an olanzapine acid addition salt,

b) precipitating and isolating the olanzopine acid addition salt and,

c) transformation of the olanzapine acid addition salt to ~~olanzopine~~ olanzapine.

Claim 2 (Original): The process according to claim 1 wherein the organic acid in step (a) is selected from the group consisting of sulfonic acids or carboxylic acid.

Claim 3 (Original): The process according to claim 2 wherein the carboxylic acid is selected from the group consisting of fumaric acid and benzoic acid.

Claim 4 (Currently amended): The process according to claim 1 wherein the organic solvent in step (a) is selected from the group consisting of ~~tetrahydrofurane~~ tetrahydrofuran, acetone, dimethylformamide and acetonitrile.

Claim 5 (Currently amended): The process according to claim 1 wherein the mixture of organic solvents in step (a) is a mixture of ~~tetrahydrofurane~~ tetrahydrofuran with at least one polar solvent.

Claim 6 (Original): The process according to claim 5 wherein said polar solvent is selected from the group consisting of dimethylformamide, dimethylacetamide, N-methylpyrrolidone, 1,3-dimethyl-3,4,5,6-tetrahydro-2(1H)-pyrimidinone, 1,3 -imethyl-2-imidazolidinone, tetramethylurea, dimethyl sulfoxide, sulfolane, acetone and acetonitrile.

Claim 7 (Original): The process according to claim 1 characterized in that step (c) comprises the following substeps:

i) dissolving an acid addition salt of olanzapine in water,

ii) adjusting pH of the obtained solution to about 8-10,

iii) extracting olanzapine from the water phase to the organic solvent phase and

iv) isolating the acid addition salt of olanzapine from the organic solvent phase by concentrating the solution and separation of the crystals.

Claims 8-21 (Cancelled)

Claim 22 (Original): A process for the preparation of olanzapine in the form of an acid addition salt characterized in that said process comprises the following steps:

a) 4-amino-2-methyl-10H-thieno[2,3-b][1,5]benzodiazepine hydrochloride is reacted with N-methylpiperazine to yield olanzapine and

b) the obtained olanzapine is transformed to an acid addition salt thereof.

Claim 23 (Original): The process according to claim 22 characterized in that step (b) comprises the following substeps:

i) the obtained reaction mixture is diluted with water,

ii) the diluted reaction mixture is extracted with an organic solvent,

iii) the organic phase is evaporated and the residue is diluted with a second solvent to obtain a solution,

iv) an organic acid is added to the solution to precipitate olanzapine acid addition salt and

v) precipitated olanzapine acid addition salt is isolated by separation of crystals.

Claim 24 (Original): A process for the preparation of olanzapine in the form of an acid addition salt characterized in that said process comprises the following steps:

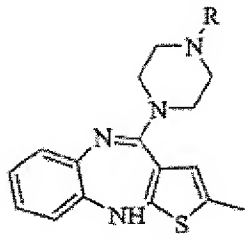
a) N-desmethylolanzapine is reacted with a methylating agent to yield olanzapine,

b) the obtained reaction mixture is diluted with water and acidified with an acid,

c) to the reaction mixture, an organic solvent is added and the phases are separated,

d) the obtained water phase is neutralized and olanzapine is extracted with an organic solvent to obtain the organic solvent phase and

e) an organic acid or substituted organic acid or an organic acid derivative of formula RX; wherein R represents an organic radical such as acetyl, propionyl, chloroacetyl and X is selected from a group of Cl, Br or I; or an organic acid anhydride; is added to the organic phase to form a N substituted N-desmethylolanzopine derivative of formula 2



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f) the obtained organic solvent phase is optionally evaporated and the residue is diluted with a second organic solvent,

g) an organic acid is added either to the obtained diluted solution or directly to the olanzapine extract from said extraction in step (d) and

h) precipitated olanzapine acid addition salt is isolated by separation of the crystals.

Claim 25 (Original): The process according to claim 24 wherein the organic solvent in steps (c) and (d) is a chlorinated solvent.

Claim 26 (Original): The process according to claim 25 wherein said chlorinated solvent is methylene chloride.

Claim 27 (Original): The process according to claim 24 wherein the organic solvent in steps (c) and (d) is methylene chloride and said second solvent in step (f) is methanol.

Claims 28-34 (Cancelled)

Claim 35 (Currently amended): Olanzapine prepared according to ~~any of the previous~~ the processes disclosed in ~~the claims 1-7 and 29-33~~ claim 1 characterized in that N-desmethylolanzapine content in the final product of olanzapine is less than 0.1 %.

Claim 36 (Currently amended): Olanzapine prepared according to ~~any of the previous~~ the processes disclosed in ~~the claims 1-7, 16-18 and 29-33~~ claim 1 that contains less than 0.05 % of piperazine 1,4-bis-4-yl-(2-methyl)-10H-thieno-[2,3-b][1,5]benzodiazepine.

Claims 37-43 (Cancelled)